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The Benefits of FDI in a Transitional Economy

The Case of China

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China is one of the most popular investment destinations in the world. Throughout much of the 1990s, China accounted for 50 percent of foreign direct investment (FDI) going into developing countries and in recent years, China has been the second largest recipient of FDI in the world, after the United States. The agreements between China on the one hand and the United States and the European Union on the other hand over China's accession into the World Trade Organization (WTO) may increase China's already impressive FDI inflows significantly. According to a forecast by Goldman Sachs, in three to four years, China's WTO membership could boost FDI to 100 billion dollars a year, from the current 40.4 billion dollars.

Despite the huge FDI inflows into China every year, both the dynamics driving up FDI inflows and the economic effects of FDI are not well understood. Many of the conventional explanations, such as ones emphasizing FDI as a form of capital import or as a mechanism to transfer know-how, do not fit well with China when applied to the case of China. This paper first presents some of the salient characteristics of FDI inflows into China and then discusses the benefits associated with such a large volume of FDI inflows.

The main point of this paper is that the contribution of FDI inflows mainly arises from the fact that FDI inflows overcome or attenuate some of the fundamental inefficiencies in the Chinese economy. Furthermore, FDI has played a substantial efficiency-improving function in large part because the Chinese government itself is unwilling to adopt those internal reforms, such as privatization and regulatory reforms, that will tackle the sources of these inefficiencies directly. Much of this paper is based on my forthcoming book, Selling China: Foreign Direct Investment during the Reform Era (New York: Cambridge University Press).

Some salient characteristics of FDI inflows

Three FDI patterns stand out among many of the details that will be presented in the next few sections. First, there is a pervasive presence of foreign-invested enterprises (FIEs) in many industries and in many regions. Second, equity alliances dominate the forms of business alliances between foreign and domestic firms. China's FDI absorption is high, not necessarily because the Chinese economy is more integrated to the rest of the world compared to other economies, but because of the dominance of equity alliances over other possible business alliances between foreign and Chinese firms. Third, many of those firms investing in China are very small and are quite different from those firms making investments in other countries. Taking those three characteristics together suggests that FDI has played a more important role in the Chinese economy than one would expect from the usual economic and business factors. Furthermore, FDI, as an equity capital flow, seems to command certain advantages over other forms of business alliances between foreign and domestic firms.

External vis-à-vis internal economic integrations

In November 1999 the Chinese government agreed to a set of far-reaching accession terms demanded by the United States as a condition for Chinese membership in the WTO and in November 2001 China formally became a member of the WTO. China's accession terms include a drastic reduction of tariffs, removal of non-tariff barriers, a substantial opening of China's financial and telecommunications service sectors to foreign investments and a substantial relaxation of many of the current ownership restrictions, etc.

By a number of conventional measures, China's economy in fact is quite open without the benefit of WTO membership. For structural reasons, it is unlikely that China would ever be as export oriented as other East Asian economies, as Dwight Perkins pointed out in the mid-1980s (Perkins 1986). But for a large continental economy, foreign trade already accounts for a substantial portion of China's GDP. Using the

official exchange rate conversion yields a trade/GDP ratio of 40 percent.[1] In the U.S., the foreign trade/GDP ratio was about 23 percent in 1994 and in Japan, it was about 20 percent in 1998. The extent of China's dependency on FDI is also high. Since the early 1990s China has been one of the largest FDI recipients in the world. In 1994, for example, China alone accounted for 49 percent of total FDI flows to developing countries and 15 percent of worldwide FDI flows.

Not only is the absolute size of FDI large, its relative size—measured by the FDI/capital formation ratio—surpasses that of many countries in the world (discussed below). Furthermore, foreign-invested enterprises (FIEs), i.e., joint ventures between Chinese and foreign firms or wholly owned foreign subsidiaries, have established a sizable presence in the Chinese economy. In a number of industries, they have come to command a dominant position. On the basis of these facts, one would have expected that the next major reform thrusts by the Chinese government would have focused on internal aspects of the Chinese economy, for example, a program to privatize inefficient SOEs, to strengthen China's legal regime, to effect more regulatory and bureaucratic transparency, and to combat official corruption, etc.

The outsized roles of foreign trade and FDI in the Chinese economy are even more interesting when one compares China's external trade and FDI dependency with its patterns of internal, cross-provincial trade and investments. In a 1994 report, the World Bank notes that interprovincial trade normalized by provincial GDP was smaller than intra-European trade (World Bank 1994). Transportation costs may explain some of this but during the reform era interprovincial trade has in fact declined, even though there have been massive investments in roads, railways, and airport facilities. Furthermore, trade economists have long noted a home bias in trade patterns, i.e., domestic residents tend to buy from one another much more than they do from foreigners. In 1988, interprovincial trade in Canada, for example, was about 20 times trade with the 30 states in the United States with which the Canadian provinces traded most intensively.[2] Here are two deeply similar countries in terms of economic, political, and linguistic dimensions that should facilitate trade and yet internal trade still exceeds external trade by a wide margin.

Chinese provinces depend on FDI to a far greater extent than they do on one another as a source of investment funds. Take Guangdong province as an example. In 1992, Guangdong invested about 2.5 percent of its total investments in other provinces, while other provinces' investments in Guangdong amounted to 1.7 percent of Guangdong total investments. In the same year, FDI accounted for 31.7 percent of Guangdong investments, far surpassing both Guangdong export of capital to other regions and its import of capital from other regions.[3] In RMB terms, the 1.7 percent of investments in Guangdong from other provinces amounted to 260 million dollars. To put this number in perspective, in 1992, firms based in tiny Macao, known more for its casinos than its computers and more for its gangs than for its garment making, invested 202 million dollars in China and 169.6 million dollars in Guangdong. This is a startling fact: Macao's investments in Guangdong amounted to 84 percent of what the rest of China invested in Guangdong.[4]

This outsized investment position held by foreign firms is by no means limited to Guangdong, a province that has wooed foreign investments particularly aggressively. Sichuan, an interior province traditionally isolated from the outside world, also depended more heavily on FDI than on investments from other provinces. In 1993, investments from other provinces represented 0.22 percent of Sichuan's total investments; foreign investments, however, represented 5.4 percent. The data compiled by the World Bank show that between 1985 and 1993 out of six provinces four on average relied more heavily on FDI than on investments from other provinces.

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[1] The purchasing power parity conversion yields a lower ratio, but purchasing power parity measures are plagued by uncertainties about what constitutes the exact purchasing power parity rate. Even if the "true" trade/GDP ratio is half of the ratio calculated on the basis of the official exchange rate, 20 percent of GDP in foreign trade is still quite large.

[2] The finding is reported in (McCallum 1995), as quoted in (Ghemawat 2000).

[3] Guangdong's investment figure is calculated from Table 2.6 (World Bank 1994, p. 52).

[4] To clarify, China bans FDI in casinos and thus Macao's large investment position cannot be attributed to this source of its competitive advantage.

Some researchers bemoan the fact that FDI is highly concentrated in the coastal provinces and that China's hinterland provinces have not attracted much FDI. In a paper on this topic, Francois Gipouloux shows that eastern China accounted for 84.5 percent of the cumulative FDI between 1985 and 1991 and 87.3 percent between 1992 and 1998. "FDI distribution," Gipouloux proclaims, "has been extremely uneven" (Gipouloux 2000). This is a common view among economic officials in China and, as a result, in recent years, the Chinese government has made FDI promotion a component of its development strategy for the central and western provinces of China.

In many ways, this view of FDI is quite misleading. The true puzzle is not why the poor, land-locked provinces do not get much FDI; the puzzle is why they get any at all. The view that FDI distribution is uneven relies on statistics on the percentage shares of FDI distributed among Chinese provinces. Remember, though, that China during this period attracted an enormous amount of FDI and thus a small portion of FDI is still a large number. According to statistics provided in Gipouloux's study, the interior regions of China accounted for about 13 percent of cumulative FDI inflows between 1992 and 1998. During this period cumulative FDI flows into China as a whole amounted to 242.26 billion dollars. This means that the interior regions of China received 31.49 billion dollars in FDI. To put this number in perspective, India's entire FDI inward stock, as of 1997, was only 11.21 billion dollars.[5]

Relative size of FDI

There is no question that the absolute size of FDI inflows into China has been huge. For some years in the 1990s, China accounted for about half of the total FDI going to developing countries. In 1996, FDI inflow, on a paid-in basis, amounted to 41.7 billion dollars. This compares to about 80 billion dollars that went to the United States in the same year. The third largest destination of FDI capital was the United Kingdom, which received 30 billion dollars. This type of comparison led to the claim that China was the second largest recipient of FDI capital in the world.

The absolute size of FDI, however, does not tell the whole story. Countries vary in their economic and market size and the size of FDI flows should be gauged relative to the size of the host economy. The absolute size of FDI flows to the United States in 1996 was twice as large as Chinese FDI but the U.S. economy was roughly seven times as large (on the basis of official foreign exchange conversion). In that sense, the United States is less "dependent" on FDI than China even though the absolute size of FDI flows into the United States is much greater.

A more useful measure is FDI normalized by the economic size of the FDI host. This is a measure of the relative size of FDI. One measure of the relative size of FDI is the "FDI/capital formation ratio." It is FDI divided by the total fixed asset investments made by foreign and domestic entities in a given year. The ratio tells us something about the relative importance of FDI to a country's economy. Conceptually, the FDI/capital formation ratio is driven by the willingness on the part of foreign investors to invest in a country relative to the willingness on the part of domestic investors to do the same.[6] In 1990, China's FDI/capital

[5] The data on India are provided in [United Nations Centre on Transnational Corporations, 1998 #2120], Annex Table B.3. The poor, hinterland provinces of China absorbed either more than or about the same level of FDI as some of the star economies in Latin America. As of 1997, the FDI inward stock for Argentina was 36 billion dollars and for Chile, 25.1 billion dollars.

[6] This measure, while commonly used in academic studies, is not without some problems. Not all FDI finances new equipment and plant investments. Some FDI flows finance the acquisition of existing assets. Thus a portion of the numerator and the denominator may measure different economic activities. (I thank Professor Huw Pill for pointing out this problem.) An additional problem is that this measure may systematically under-estimate FDI dependency in some economies while over-estimating FDI dependency in others. For example, the capital market is less active in Asia than in the United States. This may exaggerate FDI dependency of the United States when much of the FDI finances acquisition of existing assets. For example, in the late 1990s, the FDI/capital formation ratio rose sharply in the United States. This must have been a result of a sharp rise in merger and acquisition activities, which would warrant using total market capitalization as the denominator.

formation ratio was 3.7 percent and it rose to 17 percent in 1994. If the FDI/capital formation ratio rises rapidly within a short period of time (as it did in China in the 1990s), an interesting research question emerges: Why do foreign and domestic investors view the same market growth opportunities differently?

Table 1 presents data on FDI/capital formation ratios in China and a number of other countries to provide a comparative perspective. Between 1993 and 1997, on average, FDI flows into China accounted for about 15 percent of total capital formation. This ratio is one of the highest among the countries in the table, even compared with countries that are considered as traditionally very dependent on FDI, such as some Southeast Asian countries. As pointed out before, even though the United States attracted a greater amount of FDI, the relative importance of FDI in the case of the United States is far smaller than it is in the case of China. FDI only accounts for some 6 percent of total investments; China's FDI dependency is almost three times as large. Compared to other Asian economies, China was less dependent on FDI in the 1980s, but in the 1990s, its FDI dependency was among the highest in the region. Its FDI/capital formation ratio during the 1993-1997 period was lower than Singapore, about the same as Malaysia, and much higher than Indonesia, Thailand, and the Philippines. The standard wisdom in the commentary on FDI in Asia is that China is a lot more similar to Southeast Asian countries than to Korea, Taiwan, and Japan in terms of their FDI dependency. This standard wisdom is right, to a fault. In fact, in the 1990s, China is among the most highly FDI-dependent economy in Asia, more than some of the Southeast Asian economies

The FDI/capital formation ratio is also influenced by the size of domestic investments as well as the size of FDI. To control for differences in domestic investments, we can use the FDI/GDP ratio as a measure of relative size of FDI. By this measure, China also stands out among Asian countries in terms of its high reliance on FDI. In a recent paper, Urata presents FDI inflow/GDP ratios for nine Asian economies (China, Hong Kong, Korea, Taiwan, Indonesia, Malaysia, Philippines, Singapore, and Thailand) between 1986 and 1997.[7] Between 1986 and 1991, China was ranked between number four or number seven among these nine economies. Between 1992 and 1997, China was ranked consistently either as number two or number three as most dependent on FDI, behind Singapore and, sometimes, behind Malaysia as well. Take the year, 1995, as an example. In that year, China's FDI/GDP ratio was 5.1 percent, compared to 2.2 percent for Indonesia, 2.0 percent for Indonesia, and 1.2 percent for Thailand. (It was 4.8 percent for Malaysia and 8.5 percent for Singapore.)[8] The claim that China is highly dependent on FDI does not at all depend on comparing China with traditionally low FDI-dependent economies, such as Japan and Korea.

Conventional explanations of what are usually thought to be important drivers of FDI do not quite work either. Economists often invoke the so-called "savings-investment" gap theory to explain FDI flows.[9] The reasoning is straightforward. An internal imbalance in a developing economy—a resource gap between its savings and its investment requirements—leads to an external imbalance on the country's balance of payments: shortage of foreign exchange. This shortage must be financed by a combination of drawing down the foreign exchange reserves and an inflow of foreign exchange in a variety of forms. FDI is one such inflow.

[7] The FDI/GDP ratios are from (Urata 2001).

[8] The choice of the year, 1995, is not arbitrary. Because FDI flows can fluctuate more than GDP, I chose a medium ratio for China rather than either the highest or the lowest ratio. In 1993 and 1994, China's FDI/GDP ratio was as high as 6.4 percent and 6.2 percent, respectively, compared to 4.9 percent in 1997. The year, 1997, probably should not be used because Asian financial crisis might have adversely affected FDI flows into Southeast Asian countries.

[9] The discussion in this section is based on (Meier 1995, especially pp. 247-263).

Table 1 Relative FDI Size, Macroeconomic Developments, and FDI Controls 1993-1997

Countries	FDI flows/gross fixed capital formation (%)		Gross domestic savings rate, 1994-1997 (%)	Current account balance/ GDP, 1994-1997 (%)	Business environment for foreign investors		
	1987-1992	1993-1997			Ease of foreign acquisitions on 1-10 scale (country ranks out of 46 countries), 1996	Business environment ranks, 1996-2000 (out of 60 countries)	Corruption perception rank, 1997 (out of 52 countries)
China	4.0	14.6	41.76	2.74	5.69 (41)	44	41
Philippines	6.0	8.6	15.5	-8.5	5.89 (40)	35	40
Indonesia	2.7	6.14	33.5	0.0	6.29 (37)	46	46
Thailand	5.6	3.76	37.97	-6.28	5.05 (42)	30	39
Malaysia	18.8	14.1	39.98	-0.75	4.73 (43)	24	32
Taiwan	3.3	2.78	25.6*	-2.7*	5.94 (39)	21	31
Korea	1.1	1.06	35.71	-1.78	3.64 (46)	29	34
Singapore	32.2	27.0	50.92	16.4	7.69 (30)	6	9
Hong Kong	9.9	10.2	31.92	-1.35	8.80 (12)	3	18
Brazil	1.8	5.32	20.13	-0.765	7.71 (29)	38	36
Mexico	9.4	15.3	21.35	0.53	7.76 (28)	34	47
India	N/A	2.40	21.15	-2.64	6.61 (35)	45	45
United States	6.0	6.38	15.57	-1.61	8.56 (19)	1	16
Canada	5.3	8.28	20.37	1.71	7.44 (32)	5	5
United Kingdom	13.5	12.4	14.71	-0.943	8.84 (10)	4	14

Note: *: 1994 only.

Source: FDI data are from (United Nations Centre on Transnational Corporations 1999), Annex Table B.5. Savings and resource balance data are from World Development Report, various years; for Taiwan, the source is (Asian Development Bank 1995). Ease of foreign acquisitions measure is based on a survey conducted by International Institute for Management Development in Switzerland. Respondents are asked in the survey to rate countries according to 10-point scale. The perfect score, 10, is given to countries that do not impose any restrictions on foreign acquisitions and zero is for those countries in which foreigners may not acquire control. The data are reported in (International Institute for Management Development 1996). Business environment rank is a broader measure and it is devised by Economist Intelligence Unit. The country ranks for the 1996-2000 period are reported in (Business Environment Scores and Ranks 2001). The corruption perception rank is devised by Transparency International and the 1997 data are reported on http://www.gwdg.de/~uwvw/ accessed on October 23, 2001.

A "saving-investment" gap, however, is incongruous with China's large FDI absorption. In the 1990s, China had one of the highest savings rate in the world, at 41.76 percent between 1994 and 1997. The puzzle is that China's reliance on FDI deepened at the very time when the capital shortage was apparently being alleviated. By all indications, China should have been awash in capital. China's savings rate rose from an initially high level throughout the reform era. Between 1986 and 1992, the savings rate hovered around 36 percent and between 1994 and 1997, it rose to 42 percent, second only to Singapore (51 percent).[10] The acceleration of the savings rate coincided closely with an explosive growth of FDI. Between 1979 and 1997 the gross cumulative FDI flows were US$220 billion on a paid-in basis. Much of this FDI was invested after 1992. Between 1992 and 1997 the total FDI inflow was US$196.8 billion.

Thus China imported more capital when it saved more and imported less capital when it saved less! China's balance of payment statistics bear this out. In the 1990s, China ran a current account deficit only in 1993 and the balance of payment accounting convention says that in the current account surplus years China was a net capital exporter, not an importer. As Table 1 shows, on average between 1994 and 1997, China exported capital to the rest of the world to the tune of almost 3 percent of its GDP. The large FDI inflows, on top of the large current account surpluses throughout much of the 1990s, led to a huge accumulation of foreign exchange reserves. As of June 2001, China's foreign exchange reserves stood at 183.9 billion dollars, easily the largest accumulation of foreign exchange assets among the emerging markets.

China's heavy dependency on FDI is also surprising given its substantial FDI controls and its difficult business environment. As shown in Table 1, China's FDI regime was not particularly liberal in the 1990s. In terms of ease of foreign acquisitions, China was ranked fourth from the bottom among the countries included in the table. In terms of business environment rank, it was 44th among the sixty countries surveyed by the Economist Intelligent Unit during the 1996-2000 period. China was more dependent on FDI than some of the countries with more liberal FDI policies and with a better business environment.

Corruption is generally thought to deter FDI. (Wei 1996b), based on a statistical analysis of bilateral investment from fourteen source countries to forty-five countries during the 1990-1991 period, reports that corruption deters inward FDI in the same way taxes on income of MNCs do and that the corruption effect is large. Raising the corruption level from that of Singapore to that of Mexico is equivalent to the effect of a rise in the income tax rate by 20 percent. Findings of this sort have provided powerful justifications for efforts to improve public governance. James D. Wolfensohn, the President of the World Bank, stated, "We need to deal with the cancer of corruption." "We can give advice, encouragement, and support to governments that wish to fight corruption - and it is these governments that, over time, will attract the larger volume of investment" (Wolfensohn 1996).

But corruption is rampant in China while its FDI dependency is high. Table 1 reports corruption perception index devised by Transparency International in 1997. China is ranked 41st among 52 countries covered by Transparency International. According to a survey of the Political and Economic Risk Consultancy conducted in the mid-1990s, China was rated by foreign managers as the most corrupt on a list of eleven Asian countries that included some of the most notoriously corrupt countries in the world, such as India and Indonesia. According to some estimates, between one-third to one-half of all business deals in China involved some form of corruption and bribes amounted to 1-10 percent of sales. One business researcher quipped, "there are probably as many types of corruption as there are types of tea."[11] China's huge inward FDI flows would seem at odds with the presumed depressive effect of corruption.

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[10] The savings rate is defined as the difference between GDP and final consumption divided by GDP. The data are reported in (State Statistical Bureau 1998).

[11] The survey results are reported in (Li and Lian 1999). Street-wise and politically savvy Beijingers have a more vivid description of the corruption problem in China. According to folk wisdom, if one lines up all the officials against a wall and executes all of them, one kills too many. If one only executes every other official so lined up, one kills too few.

Lack of technology transfers

Technology is an intrinsically difficult concept to measure and quantify. The evidence is fairly clear that the level of hardware technology—technical sophistication embodied in machinery and equipment--associated with China's FDI flows is low. Evidence about the technological content of FDI, in the hardware sense, is available in two ways. First, an indirect measure of the hardware technology is the country origin of the FDI. A high proportion of China's FDI inflows originates from low-tech Hong Kong, but this measure is imprecise. Cross-country FDI distributions can be explained by many factors, such as cultural as well as geographic distance. That much of FDI originates from China's neighbors is not surprising in and of itself. A more pertinent issue is whether factors such as GDP size and composition of the economy under-explain China's FDI patterns. To that end, Shang-jin Wei has undertaken research that shows that China has attracted far less FDI from high-tech OECD countries than one would have predicted on the basis of its GDP size and human capital quality. This is a more direct indication of the low technological content of China's FDI inflows.

The other measure is to contrast China's FDI patterns with the patterns of its technology imports. Technology imports refer to importation of technology licensing, patents, and turnkey projects. In contrast to FDI, technology imports transfer technology to a host country via arms-length market transactions rather than via an ownership arrangement. Research by the (United Nations Centre on Transnational Corporations 1992) shows that typically the level of technology transfer associated with FDI is of more recent vintage and is more sophisticated as compared with the kind of technology transferred via arms-length market transactions. China, however, exhibits precisely the opposite pattern. This is shown by the country origins of technology trade vis-à-vis the country origins of FDI. The majority of China's technology trade is with the OECD countries, whereas the majority of China's FDI originates from the non-OECD economies.

The second type of evidence is more direct. It comes from survey and interview research conducted by two researchers, Stephen Young and Ping Lan, who have conducted the most systematic study on this topic so far. Their data come from a postal survey of 361 FIEs in Dalian city and detailed interviews with managers of thirty-six sampled FIEs. Their findings suggest that on average the level of technology as embodied in the FDI was two years ahead of China's existing level even though the "technology gap" between the investing countries and China was commonly perceived to be twenty years. The "technology package" was in most cases incomplete, meaning that the package included only one or two of the three components of what constitutes a complete technology transfer --product, process, and organizational technology. Less than 25 percent of the technology transfer projects incorporated all three components. One interesting finding of their research is that foreign firms apparently invested in China to source Chinese technology, as evidenced by the fact that a significant number of Chinese firms were more technologically advanced than their foreign investors (Young and Lan 1997).

But technology is not only embodied in machinery and equipment; technology is an encompassing concept that incorporates not just technical knowledge but such tacit knowledge as organizational, managerial, and marketing know-how. Arguably for China, software technology is a far more important component in any technology transfer that accompanies FDI inflows. Much of the FDI, as mentioned before, originates from low-tech economies such as Hong Kong and is heavily concentrated in labor-intensive industries. In this regard, measuring the technological content of FDI by the technical sophistication of the machinery and equipment is misleading and can potentially result in an under-estimation of FDI's contributions to the Chinese economy.

But the idea that foreign firms bring software technology to China is somewhat incongruous with the fact that many foreign firms are active investors in those product areas in which Chinese entrepreneurs should possess unrivaled operating and product know-how. Take herbal medicine for example. Chinese have practiced herbal medicine for thousands of years; indeed herbal medicine is known as Chinese medicine in many quarters of the world. In 1995, there were some 325 FIEs in the herbal medicine business, generating sales of 3.8 billion yuan. In comparison, in the same year, there were more than twice as many TVEs and

private firms (784) in this business and together they generated sales of 4.5 billion yuan.[12] Thus in a business one would assume native entrepreneurs to be quite competent and knowledgeable, foreign-owned firms in fact were larger in size than the non-state indigenous firms. To be sure, many of these foreign investors themselves are most likely to be overseas Chinese entrepreneurs from Hong Kong and Taiwan and they thus possess some skills in this product segment as well. However, it is implausible to argue that overseas Chinese producers are systematically and pervasively more knowledgeable about herbal medicine than the mainland Chinese producers.

Hong Kong and Taiwanese firms are efficient, entrepreneurial, and dynamic. Compared to an average firm in China, they command superior knowledge about the organization of production, management, and overseas marketing. Not only do they possess marketing know-how, through years of exporting, they also control overseas marketing channels and have earned the trust of large wholesalers and retailers in the developed economies.

It is important to note that overseas marketing control itself does not necessarily lead to dominance of production by foreign firms. In the 1960s and 1970s, giant Japanese general trading corporations, such as Mitsubishi, controlled much of the overseas marketing of footwear. Although these trading corporations often actively sponsored Taiwanese entrepreneurial start-ups in footwear production, they did not invest in them. They simply sourced from these numerous and independent facilities (Levy 1991). Similarly, firms such as Levi Strauss, with an unrivaled advantage in brand name recognition and superior marketing power, sources from independent producers on a massive scale. The widespread impression that FDI is a function of superior marketing controls and skills of the foreign firms is erroneous. No doubt this statement is true in some situations but it is not true in other situations in which foreign marketing controls and skills can be accessed and utilized by indigenous manufacturing firms through a contractual arrangement.

Some have pointed out that investors in China in labor-intensive production are not Western retailers themselves but their purchasing agents located in Hong Kong, Taiwan or Korea. This is a factually valid observation but the relevance of this statement to an FDI analysis is not clear. The example of Mitsubishi shows that there is no intrinsic reason why an agency firm—i.e., one which purchases products for Western retail outlets—has to invest to source its products. A firm like Mitsubishi played identical functions as many of the agency firms today in Hong Kong and Taiwan and yet it sourced its products rather than directly operated production facilities. An agency function itself does not give rise to FDI; the feasibility, or lack thereof, of contract production does that. A more relevant analytical matter, thus, is to examine those conditions that affect feasibility of contract production, not who is doing the direct investments.

It is not at all clear why there is not an indigenous supply of managerial capabilities and entrepreneurship such that they have to be imported via FDI on a massive scale. This is an especially pertinent issue in export-oriented industries where the firm size is small; production is often unintegrated; the operation is of an overwhelmingly assembly nature; and performance often entails a dedicated and specific task (such as sewing buttons on shirts or manufacturing the uppers for shoes). Is the lack of indigenous supply of these basic skills due to low human capital on the part of Chinese entrepreneurs and workers? Or is it possible that indigenous entrepreneurship is in fact extant but the problem is that its utilization is impeded somehow? Is the managerial know-how being transferred of such a nature that it requires an ownership arrangement such as FDI? Is it actually so bundled to the capital that other mechanisms of transfer, such as hiring and contracting foreign managers, cannot be utilized? Even more basically, has the much-touted transfer of know-how in fact taken place on a scale commensurate with the scale of China's FDI?

Preferences for ownership arrangements

As Table 2 illustrates, FIEs account for an extremely large share of Chinese exports, far more than FIEs did in Taiwan and Indonesia. FIEs also dominate export marketing channels across the board, both in

[12] Data are from (Office of Third Industrial Census 1997).

labor-intensive and capital-intensive industries, unlike in Taiwan and Indonesia. The important and growing financing functions of FDI in China's export production are widely heralded by economists and government officials alike. Little noticed, however, is the fact that the history of export-oriented FDI is one of replacing market transaction mechanisms, such as export processing, with non-market transactions through the affiliates of the investing MNCs. Contractual alliances such as export processing and compensation trade have been completely eclipsed by ownership arrangements through FDI as China has become more accessible to MNCs. In 1983, the contractual capital inflow—i.e., leasing, compensation trade, and export processing—was about 44 percent of all FDI inflows; by 1992, the contractual capital inflow virtually disappeared (about 2.59 percent of FDI in that year). More tellingly, not only did contractual capital inflows shrink relatively but also absolutely as FDI expanded. In 1988, the contractual capital inflow amounted to 546 million dollars; in 1994, it fell to 179 million dollars (State Statistical Bureau 2001).

Table 2 FIEs' Export Shares of Total Exports in Three Economies: China, Taiwan, and Indonesia (Percent)

	China (1995)	**Taiwan (1980)**	**Indonesia (1995)**
Labor-intensive industries	Garment and footwear: 60.5 Leather and fur products: 73.2 Furniture: 75.1	Garment and footwear: 5.66 Leather and fur products: 9.64 Lumber and bamboo products: 2.72	Garment and footwear: 33 Leather and related products: 19.7 Furniture: 14.0
Capital or technology-intensive industries	Electronic and electrical appliances: 83.4 Paper and paper products: 53.4 Chemical materials and products: 31.6	Electronic and electrical appliances: 50.5 Pulp paper and paper products: 4.54 Chemicals: 34.9	Electric, measuring and photographic apparatus: 78.8 Computer and parts: 91.8 Machinery and vehicle parts: 86.1 Paper and paper products: 29.8 Chemical materials: 42.3
Manufacturing industries	47.1	20.57	29.0

Sources: Chinese data are from (Office of Third Industrial Census 1997) and Taiwanese data are from (Ranis and Schive 1985, Table 2.12, p. 109). Indonesian data are unpublished and were provided to the author by the Indonesian government through the kind assistance of Timothy S. Buehrer and Lou Wells. Professor Lou Wells generously provided the English translation of the Indonesian text.

This prevalence of ownership arrangements, in lieu of contractual alternatives, is in fact profoundly puzzling. To explicate this puzzle requires a word or two about the main similarities and differences between an equity and a contractual arrangement. Exporting through an affiliate of a foreign firm means that the goods move from a Chinese production facility to a foreign location but *within the same corporation*. (The foreign firm may use the goods as inputs in the next stage of production or may sell them to other independent buyers.) An alternative arrangement might be as follows: The same Chinese production facility, but owned by a Chinese entrepreneur, ships the goods to the same foreign company and receives a payment. He, the Chinese entrepreneur, can receive payment that covers the full costs of production plus a profit mark-up or he can receive payment only for the service of combining together the inputs supplied by the foreigner to create an output. The foreign company, upon receipt of this product, disposes of it in whatever fashion that suits its purposes.

Export market access is not a sufficient explanation as both equity and contract arrangements provide such an access. Two other benefits are often mentioned in the literature. One is that an equity arrangement facilitates know-how transfer and the other is that an equity arrangement enables foreign managers to impose quality controls more effectively. While both are plausible explanations, they fail to

account for the full scale of China's export-oriented FDI. Evidence about know-how transfer within export-oriented MNC production networks is surprisingly thin. As for quality controls, it is a common business practice that foreign vendors often monitor quality at fabrication sites under contract production. Contract production in garment making for export is widely adopted in India and Turkey and indeed was adopted in Hong Kong, Taiwan, and Korea in the 1970s. Unless one is prepared to argue that Chinese quality control capabilities are vastly inferior to those of Indians, Turks, and other East Asians, quality control alone cannot account for the large scale of export-oriented FDI. Furthermore, quality control motivation is at odds with the prevalence of equity arrangements in the production of ivory and jade sculptures where Chinese managers and workers should be quite skilled. As pointed out before, in this industry, foreign ownership of FIEs averaged 88 percent in 1995.

Some economists have argued that FDI, as an equity arrangement, provides a safeguard against contractual hazards—i.e., those hazards that arise when a foreign firm is subject to unexpected adverse changes operating in a host nation. For example, a local contractual partner can renegotiate the terms of the contract after the fact or inappropriately capture the profits of past research and development undertaken by the foreign firm. This type of problems is likely to be more prevalent in countries that offer poor property rights protection and that are underdeveloped in rule of law (such as China). Foreign firms, thus, favor equity arrangements and majority controls because they give foreign firms more operating controls.[13]

While this is a plausible explanation for the prevalence of ownership arrangements in capital- and technologically-intensive industries, it is less plausible when it comes to labor-intensive industries. It is important to note that FDI is a contract too, just as a production contract between a foreign and domestic firm. If anything, a foreign firm may prefer a production contract because a production contract is a short-term contract while FDI is a long-term contract. Under a bad legal regime, economic agents may operate under a short-term horizon and may not be confident to commit themselves to a long-term arrangement. Contractual sanctity is most important in situations in which switching costs are very high but in a perfectly competitive industry, by definition, switching costs are low and it is less necessary to rely on an ownership arrangement to safeguard against a contractual breach. FDI is a safeguard against a specific form of contractual hazards, mainly those that arise when substantial intangible assets are involved in production. For example, a local firm may free ride on the brand name, reputation and R&D of the foreign firm in situations in which the foreign firm maintains an arms-length relationship with a local firm. This is the reason why FDI, instead of technological licensing, is found to prevail in countries that have a poor intellectual property rights regime (Oxley 1997). FDI is not a safeguard against all the contractual hazards that result from a general underdevelopment of rule of law. Bad laws and ineffective legal enforcement are detrimental to FDI contracts as well as to production contracts.

Benefits of FDI for China

Many of the rather unusual FDI patterns in China suggest that FDI inflows into China are driven by different dynamics from other countries and thus they may require a different analytical perspective. In the following sections, I discuss this alternative perspective and the efficiency effects associated with China's FDI inflows.

An alternative FDI perspective

Under identical macroeconomic conditions, whether a country gets more or less FDI relative to domestic investments depends on the competitiveness of its firms vis-à-vis foreign firms. Conceptually, for FDI to occur, foreign investing firms need not be among the most technologically advanced and organizationally sophisticated MNCs in the world. All that is required is that they are more efficient than the indigenous firms in the host economies. For this reason, the competitiveness of indigenous firms affects FDI incidence as much as the competitiveness of foreign investing firms. If the Chinese firms had been more efficient, they could have responded more effectively to an expansion of domestic or foreign markets and

[13] I thank Professors Pankaj Ghemawat, Tarun Khanna, Dwight Perkins, and Lou Wells for raising this issue.

foreign firms might have found it less profitable to invest in China. FDI might not have risen as rapidly as it did in the 1990s.

Here the quality of China's financial and economic institutions matters for FDI. At any given level of market size or labor cost, well-designed financial and economic institutions will make indigenous firms more competitive. It is unlikely that China would receive a massive amount of labor-intensive FDI when efficient local entrepreneurs were able to access capital easily. Small foreign firms may find it more profitable to engage in contract production instead. Poorly designed financial and economic institutions, on the other hand, hamper local entrepreneurs from reaping the benefits of domestic and external market growth and may lead to greater investment opportunities for foreign firms. Efficient economic and financial institutions lead to efficient firms and inefficient economic and financial institutions would lead to greater FDI inflows in the presence of attractive macroeconomic fundamentals. The reason is that inefficient indigenous firms are unable to respond to the new market opportunities effectively.

The main manifestation of inefficiencies in the Chinese economy is that China's vast financial resources and attractive business opportunities have been allocated to the most inefficient firms—China's state-owned enterprises, while China's most efficient, dynamic and entrepreneurial firms, its private firms, are denied the same resources. It is also important to note that to this day the Chinese government has refused to undertake a large-scale privatization program to deal with many of the problems in the state sector, while it has actively sought FDI.

The result is an across-the-board uncompetitiveness of domestic firms. Let me use a computer example as an illustration. Imagine a personal computer of the early 1990s vintage equipped with a Windows 2000 operating system. Now further imagine another computer, which was the most high-powered on market in 2001 but which was equipped with a DOS operating system from the 1980s. This is an inefficient combination of hardware and software resources and capabilities and the likely result is poor performance from both computers.

If we use software capabilities to refer to entrepreneurship, risk taking, business acumen, profit motives and hardware resources to refer to financial resources, market opportunities, advanced technology and equipment, this computer analogy gives us an idea of how the Chinese economic system has functioned. To put it simply, the Chinese system has allocated the best of its hardware resources to firms with the worst software capabilities and skills, i.e., SOEs. At the same time, the system denies its firms with best software capabilities, i.e., private firms, access to its abundant hardware resources. The cumulative effect of this economic allocation decision is that private firms did not have sufficient resources to grow and to develop into competitive firms while the SOEs have squandered the resources they did have. Indigenous firms are thus uncompetitive across-the-board and, as I will show in the next three chapters, FDI surged in the 1990s as indigenous firms failed to effectively respond to the new market and production opportunities.

A comparison with India is helpful here. Although India's economy is about half the size of Chinese economy and its growth rate is lower, India is now home of a number of very large and globally competitive firms. We use a crude metric, the size of firms, as the measure. The size of firms is a rough , although imperfect, indicator of a firm's growth potentials. Today, the largest private firm in China is the Hope Group, located in Sichuan province. This agribusiness conglomerate generated annual sales of 600 million dollars in 1999.[14] The largest private firm in India, Tata Group, generated sales of 7.2 billion dollars in 1995 and its division in tea business alone generated sales of 163 million dollars in the same year.[15] Take another example, this one from the pharmaceutical industry. In 1997, the largest pharmaceutical firm in China was Sanjiu, with sales of 670 million dollars (Nolan 2001, p 161). Contrast Sanjiu with Ranbaxy Laboratories Limited of India, one of the largest Indian pharmaceutical firms. In 1995, Ranbaxy generated sales of 2.27

[14] See (International Finance Corporation 2000), p. 4.

[15] Information on Tata Group is from (Khanna, Palepu and Wu 1998).

billion dollars, despite the fact that Chinese pharmaceutical market was three times as large as the Indian market. Ranbaxy has invested aggressively in China through its two affiliates there (Ghemawat 1998).

Efficiency of FDI

Even though the fundamental underlying causes of China's high FDI demand have been inefficient financial and economic institutions, one should not make the inference that the effects of the large FDI inflows into China are inefficient. In fact, the opposite is true. As many of the FDI inflows were driven by the relatively superior entrepreneurship of foreign firms, the effect of the FDI is an increase in the overall efficiency of the Chinese economy. Potentially profitable but unfunded business ventures are now being funded by foreign entrepreneurs and they have grown and created value in a way that would not have been possible without this type of FDI. As a matter of fact, the most efficient form of FDI is precisely the type of FDI Chinese economic officials most often deride—the labor-intensive and export-oriented FDI originating from Taiwan, Hong Kong, and Macao. The efficiency associated with this type of FDI has less to do with the transfer of marketing and management know-how, as often alleged in writings on this topic. The more important effect is that this type of FDI counteracts the distortions and inefficiencies of two prominent features of China's economic policy, namely, an inappropriate industrial policy regime that allocates China's financial resources toward wasteful heavy industry projects and an ownership bias in favor of China's least efficient firms.

The effect of FDI must be judged against the extant inefficiencies in the Chinese economic system. This is a productive way to think about both the efficiency effect of FDI and the limitations of such an efficiency effect. At its core, what labor-intensive FDI has done is to offset some of the inefficiencies in the Chinese system. The same logic applies when assessing the efficiency contributions of FDI in heavy industries and of foreign acquisitions of assets previously under the control of SOEs via JVs or more direct methods. In heavy and capital-intensive industries, SOEs compete mostly with other SOEs. Although competition is better than no competition, it is important to note that all the SOEs are subject to similarly soft budget constraints and such a kind of competition may not lead to the most efficient results. FIEs are the only firms allowed by the government to compete with SOEs. Again, by a deliberate policy of imposing market entry restrictions on indigenous private firms, FIEs represent a genuine source of competition in the Chinese economy by default.

In some parts of the country and in certain industries, the FDI phenomenon is associated with transferring assets and managerial controls from SOEs to foreign firms. The parent SOEs are specializing increasingly in the provision of social services, funded in part from the dividend payouts from their stakes in their FIE affiliates. Many SOEs with equity interests in FIEs have shed their operating and managerial functions. On the asset side of their balance sheets, a growing portion of their assets consists of equity claims on FIEs and more and more of their income consists of non-operating sources, such as dividend payments from their affiliated firms.

All things considered, SOEs are better at providing social services than at providing commercial services and products. Asset acquisition by foreign firms, in all likelihood, has the effect of improving allocative efficiency. There are, however, several caveats. First, because private firms have been systematically suppressed, they cannot bid for the assets of SOEs as effectively as they otherwise would be able to. As a result, foreign firms are more successful bidders. Secondly, and probably more importantly, because the government does not allow a large-scale privatization program, only foreign firms can launch bids for SOE assets. Thus the acquisition by foreign firms of SOE assets takes place in an asset market that is not as contestable as it could be. This is a cost for the country because it means that foreign firms are able to acquire Chinese assets at possibly more advantageous terms than otherwise would be the case. This cost attenuates the larger benefits of privatization and competition associated with FDI. Third, the suppression of domestic entrepreneurship raises the demand for the privatization functions played by the MNCs. Remember that foreign firms are wooed to invest in China by tax breaks and the conferral of other benefits. To some extent, China desperately needs foreign capitalists to take over its insolvent SOEs precisely because it does not allow its own capitalists to do so.

Conclusion

In the concluding section of this paper, let me discuss the main benefits of China's accession to the WTO. The main benefits, I believe, have less to do with enhanced roles of foreign trade and FDI in the Chinese economy, as foreign trade and FDI are already playing very important roles in China's economic development. The most important benefit of the WTO membership is that it will attenuate the inefficiencies of domestic financial and economic institutions.

The WTO accession is likely to promote internal reforms in three ways. First, the Chinese leaders today are faced with a stark choice between socialism and nationalism. Socialism as an economic idea has failed all over the world but in China it has failed in a particular fashion: It has created many profitable business opportunities for foreign firms. So far the strategy has worked brilliantly. In the early 1990s, when the economy was growing rapidly, there was less concern from the public about how the economic pie was divided between foreign and domestic firms. But as the economy begins to slow down, policy makers and Chinese public will be more concerned about the distributive implications of such a strategy. It is likely that economic nationalism will be on the rise. Many in China increasingly fear foreign firms as formidable competitors in the marketplace and as threatening to drive indigenous firms out of business. The failures of the Chinese firms are driven by a policy choice of the government to support the least efficient SOEs to the detriment of the efficient private firms, not by competition with foreign firms. It is likely that the Chinese state may decide to support private firms out of a nationalistic imperative. It may conclude, as I do here, that the most efficient and the most competitive firms are private firms and that they constitute the only viable competitive force with foreign firms. It is plausible that the increasingly encouraging stance of the government toward the private sector, including a statement issued by President Jiang Zemin on July 1 2001 to welcome private entrepreneurs into the ranks of the Chinese communist party, came from this realization.

The second likely effect of the WTO membership comes from the efficiency improvement of China's service sector. Reforms in China's service sector, in banking, insurance, wholesaling, retailing and telecommunications, have lagged behind reforms in the real sector. SOEs still dominate these service industries to a far greater extent than they do in the manufacturing sector. Service sector is particularly important in an economy because service firms are in business for business and inefficiencies of service firms have a significant dragging effect on the entire economy. The WTO accession is going to force China to open its doors to the most efficient foreign service providers. This would be beneficial to China's indigenous private firms. Inefficient service SOEs—the banks being just one example—are a bottleneck for the growth, development and maturing of China's indigenous private firms. Had the Chinese state opened up its service sector earlier and had the financial resources and corporate opportunities been allocated to firms with good business acumen and the right mix of performance incentives, world-class Chinese private firms would have appeared on the scene by now, probably in household appliances and electronics, such as those in Korea and Japan that emerged during their economic takeoff eras.

The third likely effect of the WTO membership is that China will become more institutionally integrated to the global economy. So far, the open-door policy has increased China's *economic* integration, i.e., an increasingly large share of the GDP is traded on the world market and a large portion of the capital formation comes from foreign sources. But China's economic, regulatory and legal institutions remain quite insulated. WTO membership will change that. After its formal accession, the Chinese government will have to re-write many laws and regulations on its book in order to conform to the requirements of the WTO membership. Removing and streamlining cumbersome business regulations will lower transaction costs for *all* firms, whether foreign or domestic, and will benefit those efficient domestic firms operating in a local market niche or endowed with substantial local know-how. Many in China fear that the WTO accession will wipe out indigenous firms. This is patently false. The greatest threat to private firms in China is not competition from foreign firms but China's own inefficient business environment and its commitment to SOEs. The best evidence is that Guangdong, the most open province in China, is the home of some of the best indigenous firms in China.

Bibliography

Asian Development Bank (1995). Key Indicators of Developing Asian and Pacific Countries. Manila, Oxford University Press.

“Business Environment Scores and Ranks.” (2001). Transition

Ghemawat, Pankaj (1998). "Repositioning Ranbaxy". Boston, Harvard Business School Publishing.

Ghemawat, Pankaj (2000). "Economic Evidence on the Globalization of Markets". Boston, Harvard Business School Publishing.

Gipouloux, Francois (2000). "Declining Trend and Uneven Spatial Distribution of Fdi in China". China Review 2000. Chung-ming Lau and Jianfa Shen. Hong Kong, The Chinese University Press**:** 285-305.

Huang, Yasheng (2002). Selling China: Foreign Direct Investment During Reform Era (New York: Cambridge University Press).

International Finance Corporation (2000). China's Emerging Private Enterprises: Prospects for the New Century. Washington, DC,, International Finance Corporation.

International Institute for Management Development (1996). The World Competitiveness Report 1996. Lausanne, IMD.

Khanna, Tarun, Krishna Palepu and Danielle Melito Wu (1998). "House of Tata, 1995: The Next Generation (a)". Boston, Harvard Business School.

Levy, Brian (1991). “Transaction Costs, the Size of Firms and Industrial Policy.” Journal of Development Economics 34: 151-78

Li, Shuhe and Peng Lian (1999). "Governance and Investment: Why Can China Attract Large-Scale Fdi Despite Its Widespread Corruption?". Hong Kong, City University of Hong Kong

Chinese University of Hong Kong.

McCallum, John (1995). “National Borders Matter: Canada-U.S. Regional Trade Patterns.” American Economic Review 85(3): 615-623

Meier, Gerald M., Ed. (1995). Leading Issues in Economic Development. New York, Oxford University Press.

Nolan, Peter (2001). China and the Global Economy: National Champions, Industrial Policy, and the Big Business Revolution. New York, Palgrave.

Office of Third Industrial Census (1997). The Data of the Third National Industrial Census of the People's Republic of China in 1995. Beijing, Zhongguo tongji chubanshe.

Oxley, Joanne Elizabeth (1997). “Appropriability Hazards and Governance in Strategic Alliances: A Transaction Cost Approach.” Journal of Law, Economics and Organization 13(2): 387-409

Perkins, Dwight (1986). China: Asia's Next Economic Giant. Seattle, University of Washington Press.

Ranis, Gustav and Chi Schive (1985). "Direct Foreign Investment in Taiwan". Foreign Trade and Investment. Walter Galenson. Madison, University of Wisconsin Press**:** 102.

State Statistical Bureau (1998). A Statistical Survey of China 1998. Beijing, Zhongguo tongji chubanshe.

State Statistical Bureau (2001). Zhongguo Tongji Nianjian 2001 [China Statistical Yearbook 2001]. Beijing, Zhongguo tongji chubanshe.

United Nations Centre on Transnational Corporations (1992). World Investment Directory 1992. New York, United Nations.

United Nations Centre on Transnational Corporations (1999). World Investment Report 1999. New York, United Nations.

Urata, Shujiro (2001). "Emergence of an Fdi-Trade Nexus and Economic Growth in East Asia". Rethinking the East Asia Miracle. Joseph E. Stiglitz and Shahid Yusuf. Oxford, Oxford University Press: 409-460.

Wei, Shang-jin (1996b). "How Taxing Is Corruption on International Investors". Cambridge, NBER Working Paper No. W6030.

Wolfensohn, James D. (1996). Transition 7(9-10): 9-10

World Bank (1994). China: Internal Market Development and Regulations. Washington, DC, World Bank.

Young, Stephen and Ping Lan (1997). “Technology Transfer to China through Foreign Direct Investment.” Regional Studies 31(7): 669-679.